

Amendment
Application No. 10/532,059
Attorney Docket No. 052453

REMARKS

Claims 1, 3-10, 12-15 and 17-28 are pending. Claims 2, 11 and 16 are cancelled herein without prejudice or disclaimer. Claims 1, 3, 4, 8, 9, and 12 are amended herein. New claims 23-28 have been added herein. Support for the amendments is detailed below. Support for the new claims is found on page 7, lines 7-9 and page 20, line 23 to page 21, line 16 of applicants' U.S. specification.

Applicants' Response to the Claim Rejections under 35 U.S.C. § 112

Claims 1-2 and 17-22 are rejected under 35 U.S.C. § 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Specifically, the Office requires that the "transmittance" referred to in the claims be more distinctly described as "light transmittance." In response thereto, applicants have added the term "light" to claims 1 and 12 to address the rejection.

Applicants' Response to the Claim Rejections under 35 U.S.C. §102(b)

Claims 1, 17 and 18 are rejected under 35 U.S.C. § 102(b) as being anticipated by Land (US 2,454,515). In response thereto, applicants have amended parent claim 1 to incorporate the limitation of claim 2. Wherefore, applicants respectfully submit that the rejection is now moot.

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Claim 2 is rejected under 35 U.S.C. § 102(b) as being anticipated by Land (US 2,454,515) as applied to claims 1, 17 and 18 above, and as evidenced by Thomas (US 3,281,344). Applicants respectfully traverse on the basis that there is no teaching of the element requiring an aspect ratio (a ratio of a maximum length/a minimum length) of 2 or less.

As described on page 21, lines 2-16 of applicants' U.S. specification, "domains formed with fine metal particles ...are not... preferably aligned in a specific direction...and an aspect ratio thereof is preferably 2 or less." As set forth on page 7, lines 7-9, "...if the aspect ratio is 2 or less, no necessity arises for a step of aligning the particle with respect to a major and minor axis." Hence, the structure of applicants' polarizer is different from the structure of Land claim 13 in that the fine metallic particles of applicants' polarizer are not required to be aligned; whereas, the particles of the polarizing agent of Land must be aligned.

In regard to Claims 1, 17 and 18, the Office Action points to Land as disclosing a polarizer in which fine metallic particles having a long axis and a short axis are dispersed in a polymer and the long axis of the fine particles is oriented in the orientation direction of the polymer. However, Land, as cited in the Office Action, describes in col. 11, lines 11 to 13 that "said polarizing agent is a colloidal needle-like asymmetric metal." Therefore, an aspect ratio of 2 or less, as required by applicants' claim 1 is not derivable from the description of "needle-like" asymmetric metal.

The Office maintains that Land satisfies Claim 2 before amendment that describes the aspect ratio from the description of Thomas (USP 3,281,344). However, as described above, the

aspect ratio in Land is “needle-like.” Therefore, the feature of amended claim 1 requiring the aspect ratio is 2 or less is not inherent to the cited references; and therefore, is not present in the prior art.

Claims 8-12 are rejected under 35 U.S.C. § 102(b) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Land (US 2,454,515). In response thereto, applicants have amended parent claim 8 to include the feature from original claim 2 that the aspect ratio is 2 or less. Applicants respectfully submit that for the same reasons as recited above in regard to original claim 2 that Land does not teach each and every limitation of the amended claims.

Claims 4-6 are rejected under 35 U.S.C. § 102(e) as being anticipated by Hikmet (US 6,833,166). In response thereto, applicants have amended parent claim 4 to include the features from original claim 2. Applicants respectfully submit that Hikmet does not teach all the limitations of the amend claims.

The Office cites to the disclosure in Hikmet of free metal particles dispersed in a matrix formed with a liquid crystalline material. See col. 5, lines 13-16. Hikmet describes forming a specific polymer compound which is chemically bound to metal atoms to form quantum dots. See Figs. 3-1 to 3-3. As described in Hikmet, a polymer is formed and an organic metallic of Cd is added and bonded to the polymer. Fig. 3-1. Hydrogen sulfur is added to form CdS “quantum dot” complexes within the polymer. Figs. 3-2 to 3-3. See also col. 4, line 1 to col. 5, line 22. The Office maintains that the quantum dots of Hikmet are equivalent to the fine metallic particles

set forth in the claims. As illustrated in Fig. 3-3 of Hikmet, the CdS complex is specifically formed between two hydrogen bound CO₂-H functional groups of the polymer matrix. Hence, the fine metal particle (i.e. quantum dots) of Hikmet must be aligned within the polymer.

As such, Hikmet does not describe free fine metallic particles as set forth in amended claim 4. In fact, Hikmet teaches a metal salt (CdS) is used, and only metal salts binding to a polymer are disclosed as shown in Figs. 3-1 to 3. Accordingly, Hikmet does not teach fine metallic particles are “dispersed” to form the fine domain. On the contrary, as described above, the metal salt is bound to a polymer in Hikmet. Therefore, Hikmet is substantially different from the present application in that the fine metallic particles are not “dispersed.”

In addition, Hikmet does not disclose that “the aspect ratio is 2 or less” in the case of the matrix similarly to the case of the polymer.

Claims 8-11 and 13-16 are rejected under 35 U.S.C. § 102(e) as being anticipated by or, in the alternative, under 35 U.S.C. § 103(a) as obvious over Hikmet (US 6,833,166), as evidenced by Thomas (US 3,281,344). As noted above, applicants have addressed the rejection of parent claims 8-9 based on Land by incorporating the structural features from claim 2 therein. Applicants respectfully submit that by responding to the rejection based on Land in this manner, the rejection based on Hikmet is also addressed. Specifically, as noted above in regard to claim 4, Hikmet requires the alignment of quantum dots within a polymer matrix and does not disclose that “the aspect ratio is 2 or less” in the case of the matrix similarly to the case of the polymer.

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Applicants' Response to the Claim Rejections under 35 U.S.C. §103(a)

Claim 3 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Land (US 2,454,515) as applied to claims 1, 17 and 18 above. Claim 7 is rejected under 35 U.S.C. § 103(a) as being unpatentable over Hikmet (US 6,833,166) as applied to claims 4-6 above. Claims 19-22 are rejected under 35 U.S.C. § 103(a) as being unpatentable over Land (US 2,454,515) as applied to claims 1, 17 and 18 above, and further in view of Oshima (US 4,268,127). Applicants respectfully submit that by addressing the rejection of parent claims 1, 4 and 8 as detailed above, the rejection of these claims are likewise addressed based on their dependency.

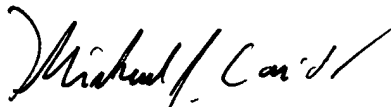
In view of the aforementioned amendments and accompanying remarks, Applicants submit that the claims, as herein amended, are in condition for allowance. Applicants request such action at an early date.

If the Examiner believes that this application is not now in condition for allowance, the Examiner is requested to contact Applicants' undersigned attorney to arrange for an interview to expedite the disposition of this case.

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If this paper is not timely filed, Applicants respectfully petition for an appropriate extension of time. The fees for such an extension or any other fees that may be due with respect to this paper may be charged to Deposit Account No. 50-2866.

Respectfully submitted,
WESTERMAN, HATTORI, DANIELS & ADRIAN, LLP

A handwritten signature in black ink, appearing to read "Michael J. Caridi", with a stylized flourish at the end.

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